

Chapter IV

CONSERVATION ELEMENT

This Conservation Element is a supplement to the Conservation Element of the TRPA Goals and Policies Plan. This element lists the required environmental targets which the Community Plan is to achieve. Also this element describes area-wide drainage systems, scenic improvements, and a land capability and stream zone analysis updating the TRPA Land Capability Overlay Maps for this area.

A. CONSERVATION OBJECTIVES AND POLICIES

The following numbered objectives relate to the Conservation goal found in the Community Plan Goals Section of Chapter I. To meet the objective, the following specific policies are adopted as standards:

1. Ensure the attainment and maintenance of the environmental threshold related targets established for the Community Plan.
 - a. Policy: TRPA may review progress on target attainment periodically and make adjustments to the targets and implementation schedules.
 - b. Policy: The mitigation measures listed in the Target Matrix as subject to project review shall be given priority for mitigation over other similar listed mitigation measures. Projects approved by Placer County or TRPA shall not preclude future implementation of required mitigation measures. The amount of mitigation shall be commensurate with the magnitude, the impacts, and the incentives related to the proposed project.

B. ENVIRONMENTAL TARGETS

The following represents an identification of opportunities for environmental improvement associated with the Carnelian Bay Community Plan. Achievement of the environmental targets is an important consideration for approving CPs. Therefore, development bonuses are linked to key implementation strategies.

The matrix indicates the projects and regulations considered for the achievement of environmental and recreational targets. The matrix indicates if the measure is (R) required, (E) encouraged, or (O) optional for a target achievement. The (X) indicates the measure: is to be considered as a condition of approval for project review, is considered for threshold findings, is an EIR/EIS assumption or mitigation measure, is linked to the allocation of units of use, or is linked to the substitute mitigation fees. The matrix also notes if the improvement is required by other plans, e.g. 208 Plan (208), Regional Transportation Plan (RTP), TRPA/Placer Code (CDE), or TRPA/Placer County Plans (PLN).

CARNELIAN BAY COMMUNITY PLAN REQUIREMENTS LIST FOR ACHIEVEMENT OF TARGETS
(Symbols are explained in the text following the matrix)

CARNELIAN BAY CP MEASURES	CP TARGETS	PROJECT REVIEW	CP CIP	CP EIS EIR MIT	CTHRESH. FIND	TRPA REQ.	SUB WQ FEE	SUB AQ FEE	COV. FEE	ALLOCATIONS
A. TRAFFIC/AIR QUALITY										
1. <u>LOS Policy</u>	R	X		X		RTP				
2. <u>Highway Improvements</u> S.R. 28 Improvements Carnelian Bay Intersection	R O	X	X		X			X		X
3. <u>Parking Program</u> Parking Standards & Guidelines CP Parking Lots	R	X			X	RTP				
Carnelian East Lot	R		X	X				X		X
Carnelian West Lot	R		X	X				X		X
4. <u>Transit Improvements</u> TART Expansion	R		X	X	X	RTP				
Water Transit Terminals	E				X	RTP		X		X
Ski/Tour Shuttles	E	X		X	X	RTP		X		X
Transit Facilities	R		X	X	X	RTP		X		X
Lake Tour Bus	R		X		X	RTP		X		X
5. <u>Sidewalk Improvements</u> S.R. Pedestrian Trail	R	X	X	X	X			X		X
6. <u>Recreation Trail Improvements</u> NTPUD Connector	E		X					X		X
S.R. 28 Bike Trail	R		X	X	X			X		X
7. <u>Mitigation/Fee Program</u> (Chapter 93)l	R	X		X	X	CDE				
8. <u>Other Transportation Mitigation</u> TMA Membership/Management	E	X								
Ridership Incentives	E	X		X	X	RTP		X		
Mini Van Pools	E	X		X	X	RTP		X		
Traffic Control Officer	E							X		
Truck Access Improvements	R	X			X	RTP		X		
Access Improvements	R	X			X	RTP		X		X
Home Mail Delivery	E				X	RTP		X		
Information Contingency Plans	E									
9. <u>Land Use</u> Recreation Facilities	E									
Commercial/Tourist Development	E									

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(Symbols are explained in the text following the matrix)

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B. SEZ RESTORATION										
1. <u>SEZ Target (2.3 acre)</u> Carnelian Creek Area (2.5 acre) Miscellaneous Area (1 acre)	R E	X	X		X		X		X	X
C. SCENIC IMPROVEMENTS										
1. Design Standards & Guidelines	R	X		X	X	PLN				X
2. Sign Standards	R	X		X	X	PLN				
3. Sign Program	R	X		X	X					X
4. SQIP Program	R	X		X	X	CDE				
5. View Policy	R	X		X	X					
6. Underground Policy	R	X		X						
7. S.R. 28 Improvements	R	X	X	X	X	SQP				X
8. Design Review Committee	R	X	X				X		X	X
D. LAND COVERAGE REDUCTIONS										
1. <u>L.C. Target (0.2 acre)</u> Carnelian East (0.5 acre) S.R. 28 Improvements (0.5 acre) Landscape Rule (0.1 acre)	X X X	 X X	 X X	X X X				X X X		
E. WATER QUALITY										
1. BMPs Required	R	X		X		208				X
2. <u>80% Restoration Target (2.1 acre)</u> Carnelian East (2 acre) Marina (1 acre) Carnelian West (3 acre) S.R. 28 (0.5 acre) Landscape Rule (0.2 acre)	R R R R E	X X X X X	 X X X	X X X X		CDE CDE CDE CDE CDE				X X X X X
3. <u>Area-wide Drainage System</u> Area-wide System	R	X	X	X	X	208	X			X
F. NOISE										
1. Noise Limits	R	X		X	X					

The accompanying text in this Subelement and Chapter V further explain the matrix. Chapter VII further details the programs that implements the key implementation strategies.

1. **TRAFFIC** - Traffic problems identified in the Carnelian Bay area and throughout the region present numerous opportunities for air, water, and traffic improvements.

Base Line: There were 1,700,000 vehicle miles traveled (VMT) in the region in 1981. Approximately 4,077 of those vehicle miles had origins or destinations in the Carnelian Bay Community Plan area.

The Community Plan EIS/EIR indicates that in 1987, the Carnelian Bay Road/State Route 28 intersection service level was A during the summer.

Local air quality (i.e., carbon monoxide) is not a problem and this area is being considered for designation as an attainment area based on TRPA recommendation.

TRPA Threshold: TRPA Thresholds require a 10% reduction in Region-wide VMT. Thresholds also require attainment and maintenance of state and federal water and air quality standards.

Regional Plan Requirement: The TRPA Regional Plan requires Carnelian Bay to attain a level of service D on urban roads, a level of service D at key intersections (may have four hours of LOS E), implement parking restrictions on congested roadways, and to reduce dependency on the auto. The RTP requires implementation of improvements in the Action Element and the VMT control measures listed in the RTP EIS. Chapter 93 of the TRPA Code sets forth Mitigation Fee Program. The following LOS and VMT measures directly relate to Carnelian Bay:

VMT Measures

- a. Community Plans (1988 RTP, no longer required by TRPA) - 40,000 to 60,000 VMT
- b. Bus service to Truckee (N. Shore) - 4,400 VMT
- c. Waterborne Point to Point (Region) - 11,400 VMT
- d. TART Transit Expansion (N. Shore) - 6,700 VMT - includes Carnelian Bay Transit Facility
- e. Pedestrian improvements (Region) - 6,100 VMT
- f. Bike Trails (Region) - 9,200 VMT
- g. Home Mail Delivery (Region) - 56,200 VMT
- h. Transportation Demand Management (Region) - 5,800 VMT
- i. Summer Lake Tour Bus (Region) - 9,800 VMT

LOS Measures

a. State Route 28 Roadway Improvements

Carnelian Bay Target: The CP targets are as follows:

- a. Attain Carnelian Bay's fairshare of the 1988 RTP CP target by providing the local VMT improvements noted above. Also, provide assistance in implementation of the regional VMT improvements noted above. The estimated CP fairshare is estimated to be a reduction of 2050 VMT over 20 years or 2000 for the 10 year (1997) target.
- b. Implementation of the improvements which modelling shall indicate maintenance of the RTP LOS standards at EIS-selected monitoring points on Highway 28.

Key Implementation Strategies: Along with the Mitigation Fee Program, the following improvements are key strategies to achieving the above targets:

- a. For the VMT reductions in addition to 488 VMT reduction from land use changes, the key strategies are:
 - (1) Construct the pedestrian improvements for State Route 28 - estimated 70 VMT.
 - (2) Construct the transit facilities - estimated 60 VMT. Provide assistance for increased TART service, transit coordination, and waterborne transit stops as listed in the Community Plan Transportation Element and the RTP.
 - (3) Construct bike/recreation trails on State Route 28 - estimated 60 VMT.
 - (4) Home mail delivery - 1,370 VMT.
- b. For LOS targets, the key strategies are:
 - (1) The construction of State Route 29 improvements.
 - (2) Pedestrian facilities State Route 28.
 - (3) Traffic Control Officer
 - (4) Access and Truck Access Improvements

2. **STREAM ENVIRONMENT ZONES** - There has been extensive disturbance of stream environment zones (SEZ) throughout the Region and Carnelian Bay. The identification and mapping of SEZs in Carnelian Bay indicates there are restoration opportunities.

Base Line: There are approximately 17.9 acres of SEZ in Carnelian Bay of which about 52.1 percent, or 9.3 acres, is disturbed to some extent.

TRPA Threshold: TRPA thresholds require restoration of 25% of disturbed SEZ in the Region within the 20 year life of the Regional Plan. According to the Volume III of the 208 Plan, urban areas are targeted for 1,153 acres of restoration. Of this amount, 600 acres are required to be restored by the land acquisition agencies.

Regional Plan Requirement: TRPA 208 SEZ Restoration Program does not initially target any SEZ restoration by non-acquisition agencies and property owners in the Community Plan. The 208 Plan does not have an amount specified for the acquisition agencies in the Carnelian Bay area.

Carnelian Bay Target: The CP Stream Zone Restoration Program targets approximately 25 percent or 2.3 acres for restoration by 2007. The 1997 CP target is 2.3 acres. Restoration required as offset mitigation for projects is not counted toward this restoration target.

Key Implementation Strategies: The following 2.5 acres are listed as possible areas for restoration. Restoration of 11 acres will occur in conjunction with implementation of the CIP and other proposed projects. Volume III, SEZ Protection and Restoration Program and this list may be updated as new information become available.

Site	Restoration
Carnelian Creek	2.5 acres - Conservancy project to realign Carnelian Creek
Miscellaneous*	1 acre

* These are optional or reserve areas for consideration at a later date.

3. **SCENIC** - The opportunities for scenic restoration have been identified by the TRPA Scenic Thresholds. Carnelian Bay has been identified by the TRPA Scenic Quality Improvement Plan (SQIP) as in need of scenic improvements for the highway unit.

Base Line: The 1982 Inventory identifies the principal resource within the unit as the view of Carnelian Bay and the shoreline to the southwest. This resource is identified as having only moderate quality.

In addition to these views, the forested portions of the unit at either end of the commercial area (Subcomponent #1 in the Roadway Unit Map) contribute to the area's quality. The Sierra Boat Company and Marina (Subcomponent #2 in the Roadway Unit Map) were also identified as man-made elements that provide unusual but not inappropriate visual interest. For unit #18, the 1988 travel route rating and scenic resource threshold for this unit are as follows:

- Travel Route Rating: 14
- Scenic Resource Threshold: 2

For unit 192, the 1988 shoreline travel route rating and scenic resource threshold for this unit are as follows:

- Travel Route Rating: 5
- Scenic Resource Threshold: 2

TRPA Threshold: TRPA Thresholds require TRPA to attain and maintain Scenic Route Ratings at 15+ for Highway Units and 7+ for Shoreline Units.

Regional Plan Requirements: The Regional Plan required implementation of the Scenic Quality Improvement Program (including the Restoration Program, Design Review Guidelines, Design Standards and Outdoor Advertising Standards). The SQIP requires a 27% improvement in Roadway scores and a 33% increase in Shoreline scores by 1997.

Carnelian Bay: The CP shall attain SQIP thresholds targets by 1997 through implementation of the CP Scenic Quality Improvement Program.

Key Implementation Strategies: The Carnelian Bay Community Plan shall achieve its target by implementing regulations and improvements that satisfy the following SQIP recommendations. Regulations of the Placer County North Tahoe Area Design Guidelines and Sign Ordinance will be implemented through utilizing the North Tahoe Design Review Committee. Implementation of the scenic improvements listed in Chapter VII and the sign improvement program will also be required to meet the SQIP recommendations.

Issues that are most important within the Carnelian Bay area include parking, landscaping, screening and lighting, signs, and utility lines. The following measures are recommended to improve scenic quality (with these taken primarily from the SQIP):

a. Parking

- (1) Eliminate as much on-street and back-out parking as is feasible by creating more private and public off-street parking lots;
- (2) Create landscape strips between parking areas and roadway to screen views of parked cars;
- (3) Parking areas should be located in the rear of side yards of commercial properties whenever feasible; and
- (4) In situations where vehicles are permitted (due to absence of alternatives) to either parallel park along the roadside or park perpendicularly with direct access to the street, the parking areas should be clearly delineated and limited in size. For parallel parking, no more than four spaces should be located in a row without a generous landscaped area. For perpendicular parking no more than six spaces should be located in a row without a generous landscaped divider strip.

- b. Landscaping: Landscaping should be introduced around all buildings to help visually integrate the buildings with their surroundings by mitigating their scale and softening hard edges. Landscaping should also be utilized to reduce the amount of paved or barren areas, and generally improve the appearance of the structures. Most of the major existing businesses could improve their appearance with landscape improvements. Some of those most in need of such improvements are Magic Carpet Miniature Golf, Sierra Boat Company, the 7-Eleven, and the U.S. Post Office. The appearance of the bus stop and its integration with its surroundings would also be greatly improved with landscaping. Predominantly native and naturalized plant species should be utilized to ensure compatibility with natural surroundings and to enhance their chances of survival. The scale of landscape improvements must be in proportion to the scale of the structure in order to be effective. This will be particularly true of Sierra Boat Company where the scale of landscape materials and improvements will need to be quite large to mitigate the size of the structure.
 - c. Screening and Lighting: The appearance of the Magic Carpet Miniature Golf Course is out of character with both the surrounding man-made and natural environment. Screening should be provided to decrease the visibility of this enterprise from the roadway and surrounding uses. In addition, lighting within the project should be located in a manner that minimizes the impact of lighting upon surrounding properties. Area lighting should be directed downward with no splay of light directed off-site. Any light source over 10 feet high should incorporate cut-off shields.
 - d. Signs: Signs in this unit are currently not the major visual problem they are in other units, however, all signs should comply with sign regulations in the North Tahoe Design Guidelines and Sign Ordinance.
 - e. Utility Lines: All overhead utility lines should be installed underground wherever possible. Any utilities which must be maintained above ground should be located away from major corridors or screened so as not to detract from views of the overall quality of the area.
4. **LAND COVERAGE** - The opportunities to mitigate excess land coverage are numerous throughout Carnelian Bay. The Tahoe Conservancy has planned extensive restoration work.

Base Line: Based on the updated Land Capability Map (Figure 4), the allowable land coverage is estimated to be 2.7 acres; the disturbed and soft coverage areas are estimated to be 2.6 acres; and the hard coverage is estimated to be 7.2 acres. The estimated land coverage in the Community Plan area is 56 percent.

TRPA Threshold: TRPA Thresholds limit new land coverage to the Bailey Coefficients (1% to 30%).

Regional Plan Requirement: The Regional Plan requires the implementation of an excess coverage mitigation program. This program is in Chapter 20 of the Code. The Community Plan EIS/EIR estimates that this program would achieve a (0.1) acre coverage reduction if applied to the buildout of the Community Plan.

Carnelian Bay Target: The target for 2007 is 0.1 acre based on the buildout estimate. The 1997 target is 0.05 acre.

Key Implementation Strategies: The following projects will be implemented as part of project approval or CIP implementation. Those contributing to these projects may credit the contribution toward the excess coverage mitigation fee. This list may be updated as new information becomes available.

Site	Hard Coverage
S. R. 28 Improvements	0.5 acre - Roadway landscaping
Carnelian East	0 acre - See SEZ target
Landscape Program	0.1 acre - Implementation of the 5% landscaping requirement

5. **WATER QUALITY** - The opportunities to implement area-wide BMPs, such as drainage systems, paved parking areas, revegetation/landscaping, and slope stabilization are numerous throughout the area.

Base Line: Less than (38%) of the privately owned parcels have full BMPs.

TRPA Threshold: TRPA Discharge Standards found in Chapter 81 of the Code must be attained.

Regional Plan Requirement: The Regional Plan requires the application of Best Management Practices (BMPs) to all properties within 20 years. The Regional Plan also requires the restoration of 80% of the disturbed lands within the Region. The TRPA 208 CIP indicates at least \$1,400,000 for curb and drainage improvements are needed in Carnelian Bay.

Carnelian Bay Target: The CP shall implement area-wide drainage systems where needed and implement on-site BMPs to 50% of the properties through project review or CIP programs, by 1997. The 2007 target is a 2.1 acres reduction in disturbed lands.

Key Implementation Strategies: The following programs and improvements are key strategies to achieving the above targets:

- a. Area-wide Solutions: When onsite solutions are not effective, the Plan proposes to construct a series of detention basins and wetlands, interconnected by pipes and stream channels. This may be implemented by local government or improvement districts. The basic design principles of this Plan are as follows:
 - (1) Use of infiltration or artificial wetlands is the preferred method for retention and treatment of storm runoff. Artificial wetland and engineered solutions may be considered as alternatives. The drainage systems will be designed to accommodate and treat runoff from a 20 year/one hour storm event. The drainage system will accommodate storm water generated outside the Community Plan area and, where feasible, retain and treat it.

- (2) Contributors to the area-wide solutions may substitute those contributions for the TRPA mitigation fee requirement. While not exempt from Chapter 25 requirements related to stormwater storage and treatment, in whole or in part, through proven area-wide systems.
- (3) Implementation and maintenance by a one responsible entity is preferred. Where feasible, the system should be designed to be implemented in phases consistent with these design principles. The proponents of the system shall submit proof through modelling and/or testing that the proposed systems meet TRPA standards. However, upon completion it must operate as one unified system.

The area-wide system concept map is shown in Figure 1 (also see Chapter VII for CIP description). Because of the high water table, close proximity to the Lake, marina, extensive land coverage, and most of all the large Conservancy restoration projects, this area is suitable for an area-wide system.

- b. On-site Solutions: In addition to the area-wide solutions identified above, each project within the Community Plan area will be subject to Chapter 25 requirements for paving parking and drives, slope stabilization, revegetation, and providing snow storage areas.

In cases where the property is not considered part of the area-wide system drainage improvements will be required pursuant to Chapter 25.

In cases where the property is part of the area-wide drainage system, but the area-wide drainage system requires onsite improvements or recommends onsite retention systems to reduce loadings, mitigation funds should be made available consistent with Section 82.5 of the TRPA Code.

- c. The following 6.7 acres of CIPs are listed as possible areas for restoration and/or for paving. Restoration or paving of the 16 acres will occur in conjunction with implementation of the CIP and other proposed projects. This list may be updated as new information becomes available.

Site	Revegetation
Carnelian East	2.3 acres - Conservancy Carnelian Creek realignment
Marina	1 acre - Marina storage project
Carnelian West	1.2 acres - Conservancy project
State Route 28	0.5 acre - Frontage improvements
Landscape Program	0.2 acre - Implementation of the 5% landscaping requirement

6. **NOISE** - TRPA has established noise standards in community noise equivalent levels (CNEL) measured in dBA over a 24 hour period. TRPA thresholds establish different limits for different uses.

Base Line: The North Shore Community Plan EIS measured CNEL for Carnelian Bay is as follows:

56 CNEL (50 feet from Highway 28)

TRPA Threshold: The TRPA thresholds set the following limits: 65 CNEL for commercial areas, 55 CNEL for residential and urban recreation, and 55 CNEL for highway corridors.

Regional Plan Requirement: The Regional Plan pursuant to the Compact, requires TRPA to attain and maintain the thresholds.

Carnelian Bay Target: The CP shall stay within the designated noise limits set in the CP Statement.

Key Implementation Strategies: The following programs and improvements are key strategies to achieving the above targets.

- a. TRPA shall require application of techniques for noise control such as use of setbacks, use of barriers, site design, use of vegetation, use of sound absorbing materials, and building design.
- b. TRPA shall implement the requirements of Chapter 23 of the Code.
- c. TRPA shall adopt noise performance standards as recommended by the CP EIR/EIS.

7. **FISHERIES** - TRPA has identified streams in the Region and has rated them as to habitat quality.

Base Line: The existing Stream Habitat Quality rating for Carnelian Creek is marginal (29 points for migratory and 29 points for resident). There are no other rated streams in the CP area.

TRPA Threshold: TRPA thresholds require the maintenance of 75 miles of excellent, 105 miles of good, and 38 miles of marginal stream habitat. Carnelian Creek is designated to be improved to a status of marginal.

Regional Plan Requirement: The Regional Plan pursuant to the Compact, requires TRPA to attain and maintain the thresholds.

Carnelian Bay: The CP shall attain a stream habitat status of food for migratory fish habitat (55 to 68 points).

Key Implementation Strategies: The following programs and improvements (see TRPA restoration program for details) are key strategies to achieving the above targets:

- a. Remove barriers - 10 point increase
- b. Remove or modify diversions - 10 point increase
- c. Provide cover/overhead canopies/barrier to human intrusion - 3 point increase
- d. Improve fish abundance - 5 to 10 point increase